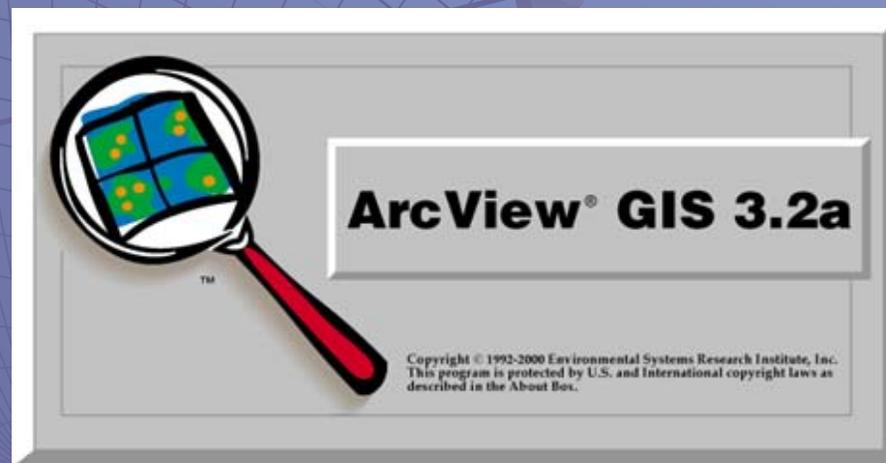




# Introduction to ArcView

## 3.2a



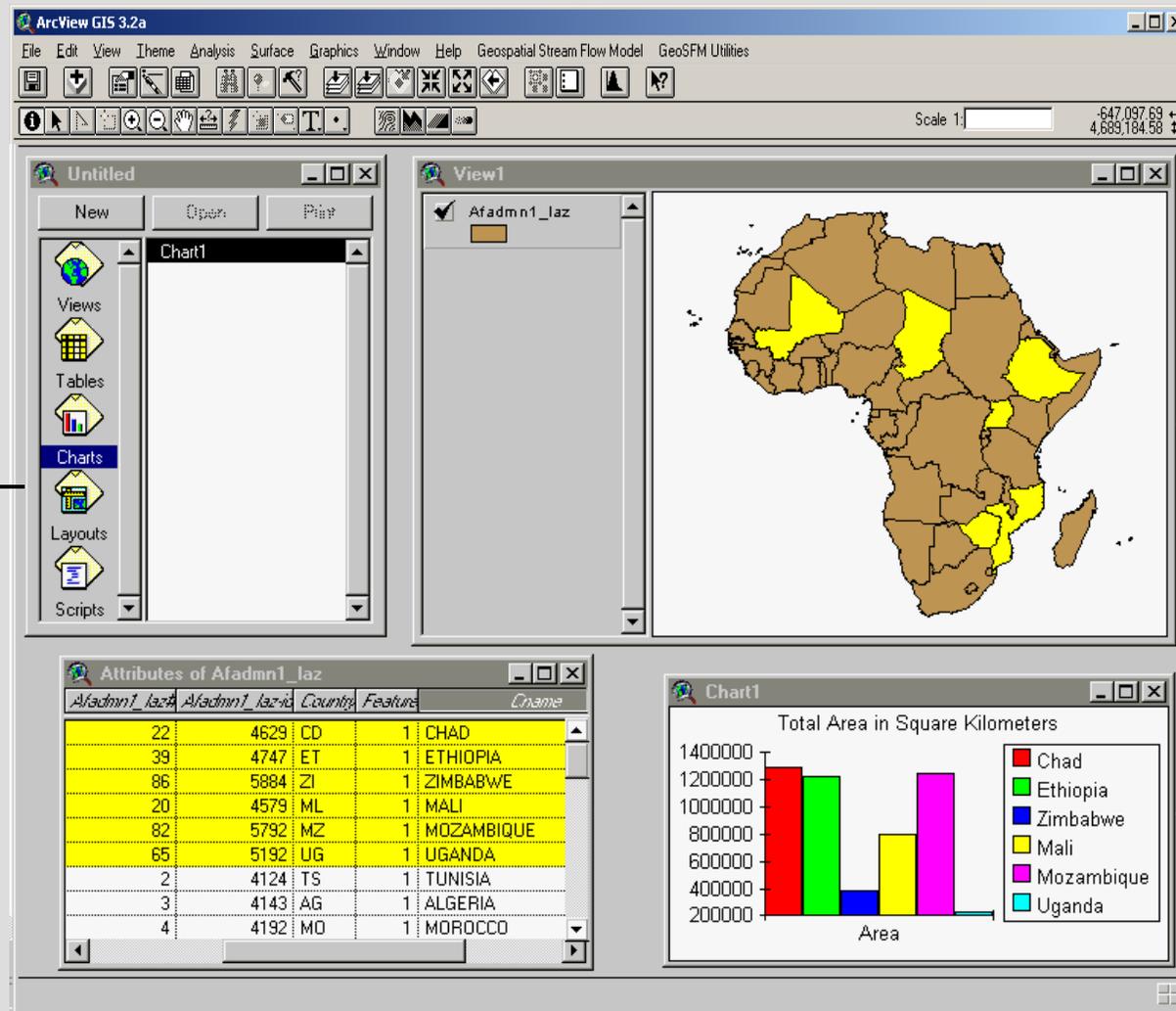
Training Center  
U.S. Geological Survey  
Center for Earth Resources  
Observation and Science (EROS)  
Sioux Falls, South Dakota, USA

# *ArcView Basics*



# Exploring the ArcView Interface:

Graphical User Interface (GUI)



Menu Bar

Button Bar

Tool Bar

Project Window

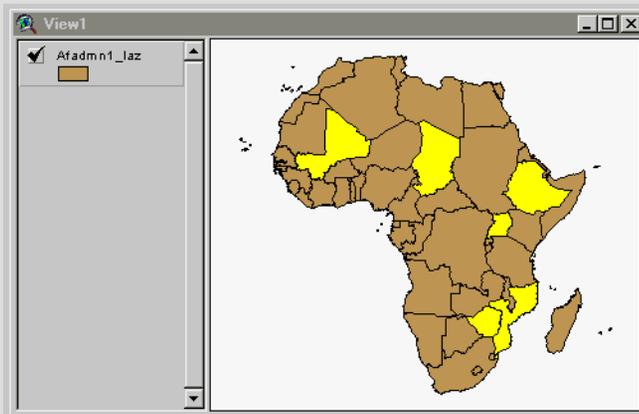
Document Windows



# Introducing Document Windows:

All data sources supported by ArcView are presented in their own window called a “document window.”

## View



## Script

```
Script2
View.BatchImportE00

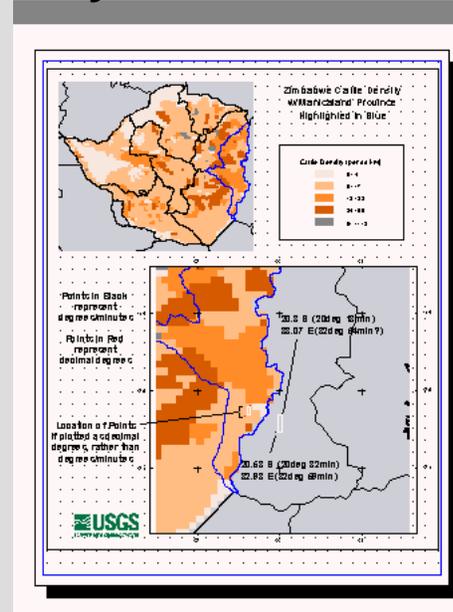
Allows batch conversion of Arc/INFO e00 files from ArcView
Using the Import71 Utility included in ArcView

User is shown a file dialog to select e00 files to import,
then a file dialog to select the output directory (only) for
the new Arc/INFO coverages. The script will then convert each
selected e00 to an Arc/INFO coverage. If run from a view,
the user will be given the choice of adding the new coverages
via the "Add Theme" dialog. May take a long time to run.

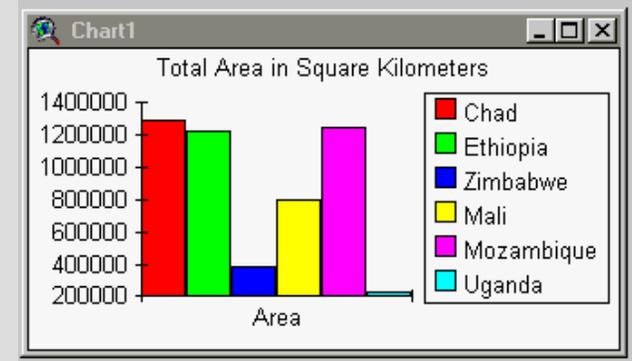
Requires the Import71 utility to exist in the \\.\arcview\bin32 direct
Windows 95,98, or NT only

Author: Tim Johnson, Maricopa County Elections Department
(the backbone of this script is from the "E00 Importer" scri
from Bill Dollins but it uses 'system.ExecuteSynchronous' i
a call to the dll to avoid segmentation violations and allc
```

## Layout



## Chart



## Table

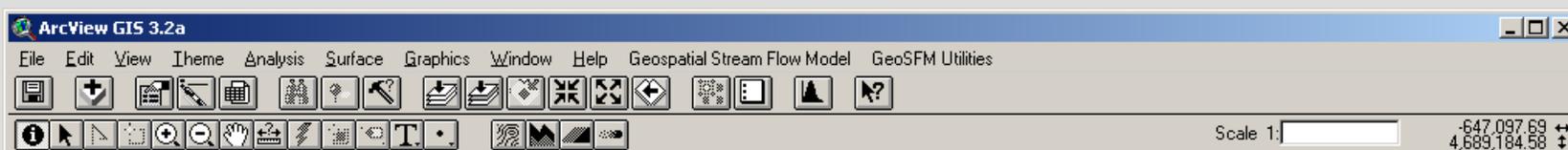
Afadm1_laz#	Afadm1_laz-id	Country	Feature	Cname
22	4629	CD	1	CHAD
39	4747	ET	1	ETHIOPIA
86	5884	ZI	1	ZIMBABWE
20	4579	ML	1	MALI
82	5792	MZ	1	MOZAMBIQUE
65	5192	UG	1	UGANDA
2	4124	TS	1	TUNISIA
3	4143	AG	1	ALGERIA
4	4192	MO	1	MOROCCO



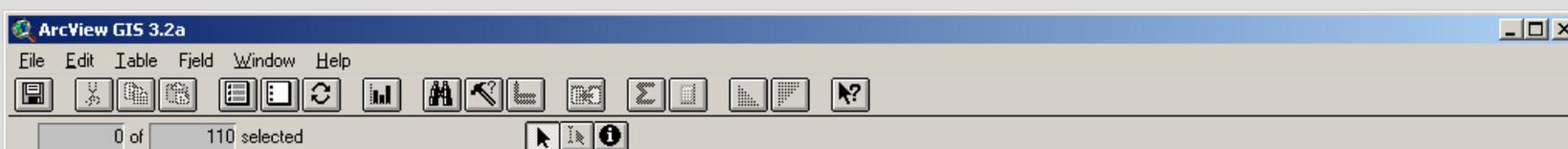
# ArcView Graphical User Interfaces (GUI's):

The tools visible in the GUI vary depending on the type of document window you are working with. Each window has it's own GUI palette.

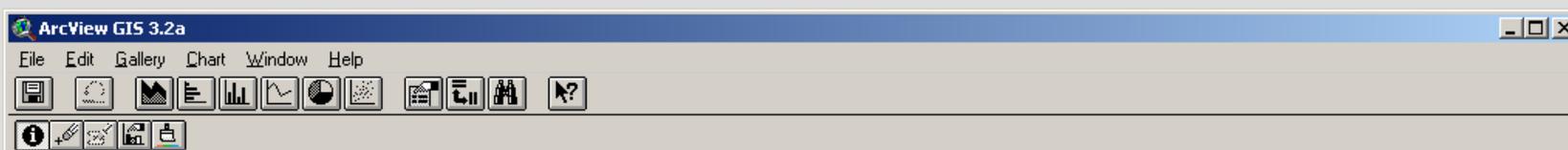
View



Table

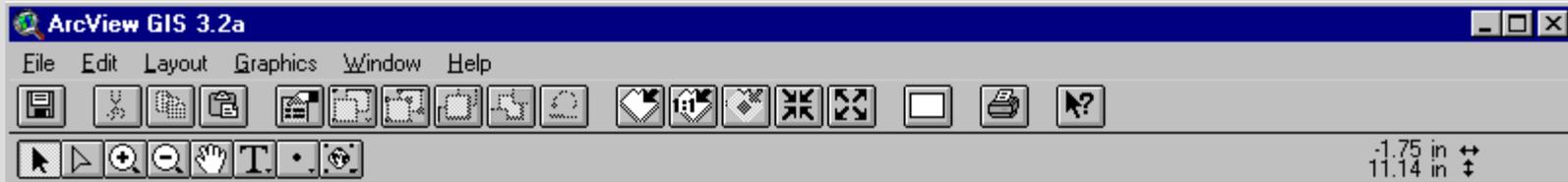


Chart

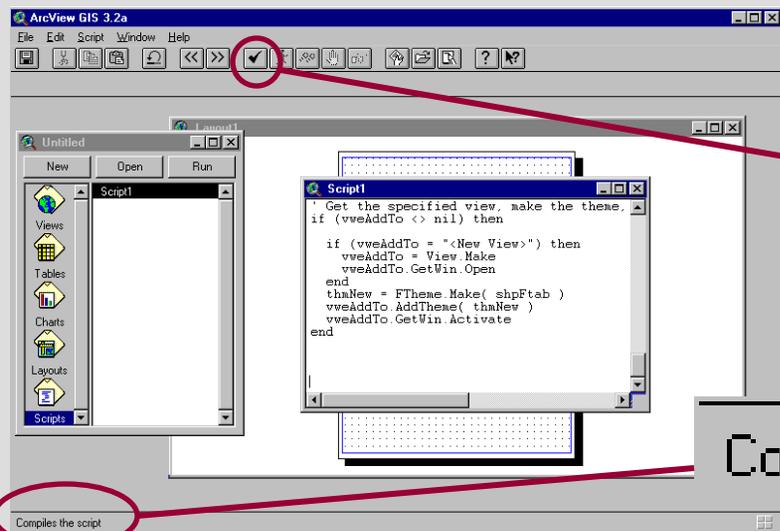


# GUI's cont'd.

Layout



Script



Tool tips appear at the bottom of the interface when the cursor is placed over a button.

Compiles the script



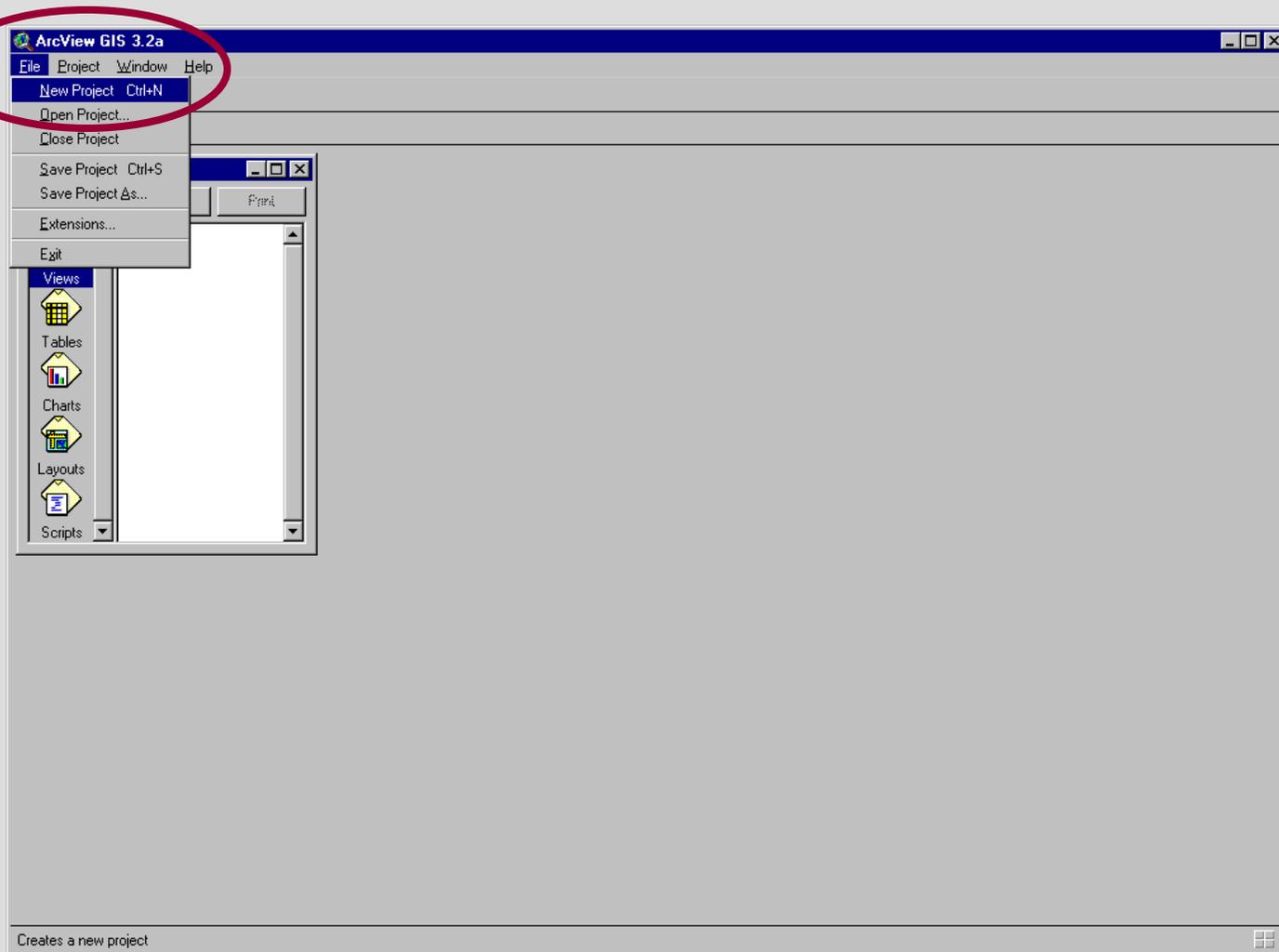
# ArcView Projects

- ❑ All activities in ArcView are conducted within a “project”.
- ❑ A project is simply a collection of associated documents that you work with during an ArcView session (views, charts, tables, layouts, or scripts).
- ❑ Only one project can be open during any given session.
- ❑ An ASCII formatted text file (.apr) stores project information.
- ❑ When you save a project you are saving a snapshot of the state of ArcView at the time of the save, including paths to the data used in the project.



# Opening a New Project:

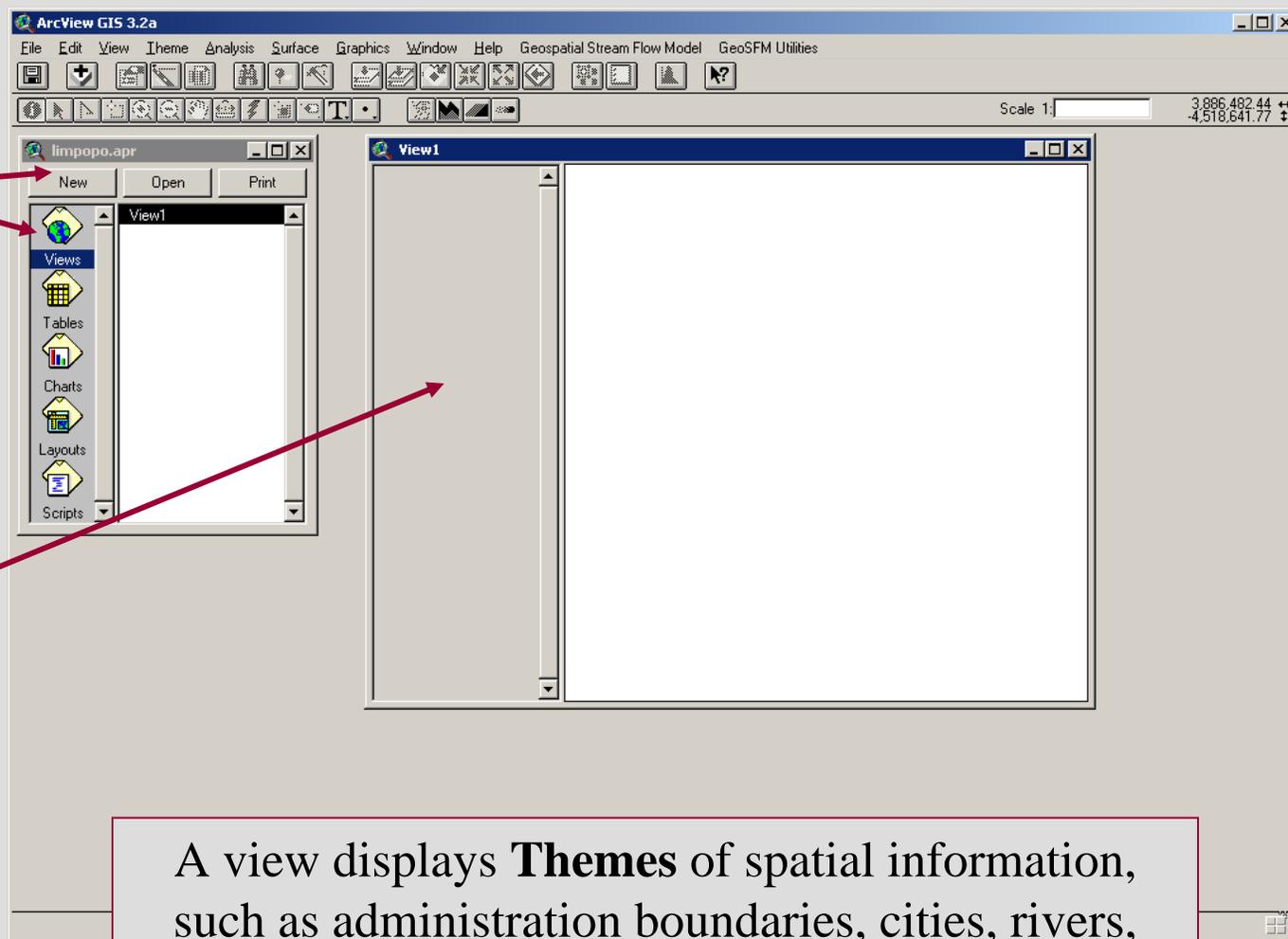
From the **File** menu select **New Project**



# Adding a View document to the project:

Select Views and New

Each View contains a Table of Contents which lists all Themes in that view



A view displays **Themes** of spatial information, such as administration boundaries, cities, rivers, roads, lakes, wells, etc.

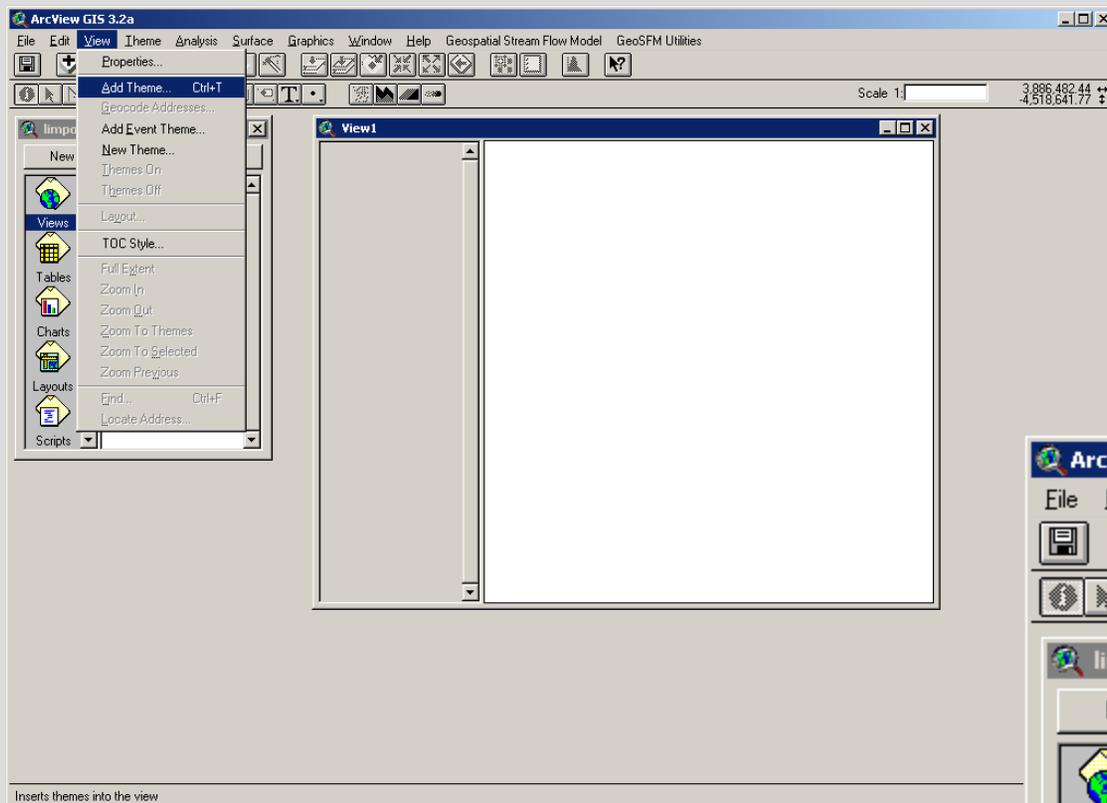


# Introducing Themes:

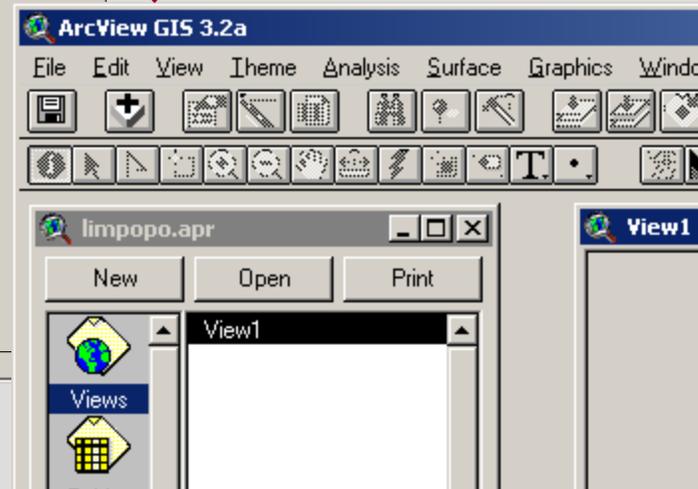


From the **View** menu select **Add Theme**

Two ways to add a **Theme** to a View

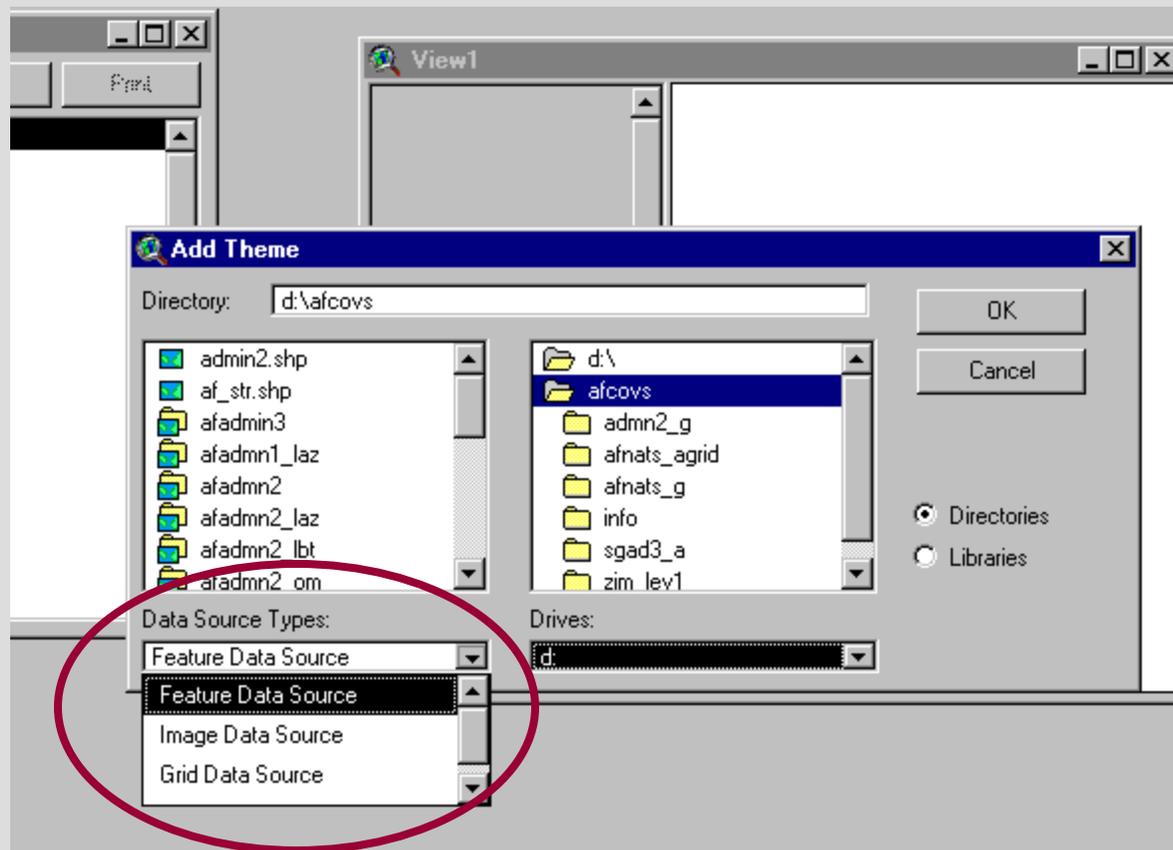


Button Bar



## Adding Themes:

The **Add Theme** dialog box allows the user to select different **Data Source Types**



\* grid data source is only available with the spatial analyst extension

## Feature Data Sources:

ArcView Shapefiles

Arc/Info Coverages (point,line,polygon)

## Image Data Sources:

Proprietary Image Formats (ERDAS,etc.)

Binary Image Files (.bil,.bsq,.bip,etc.)

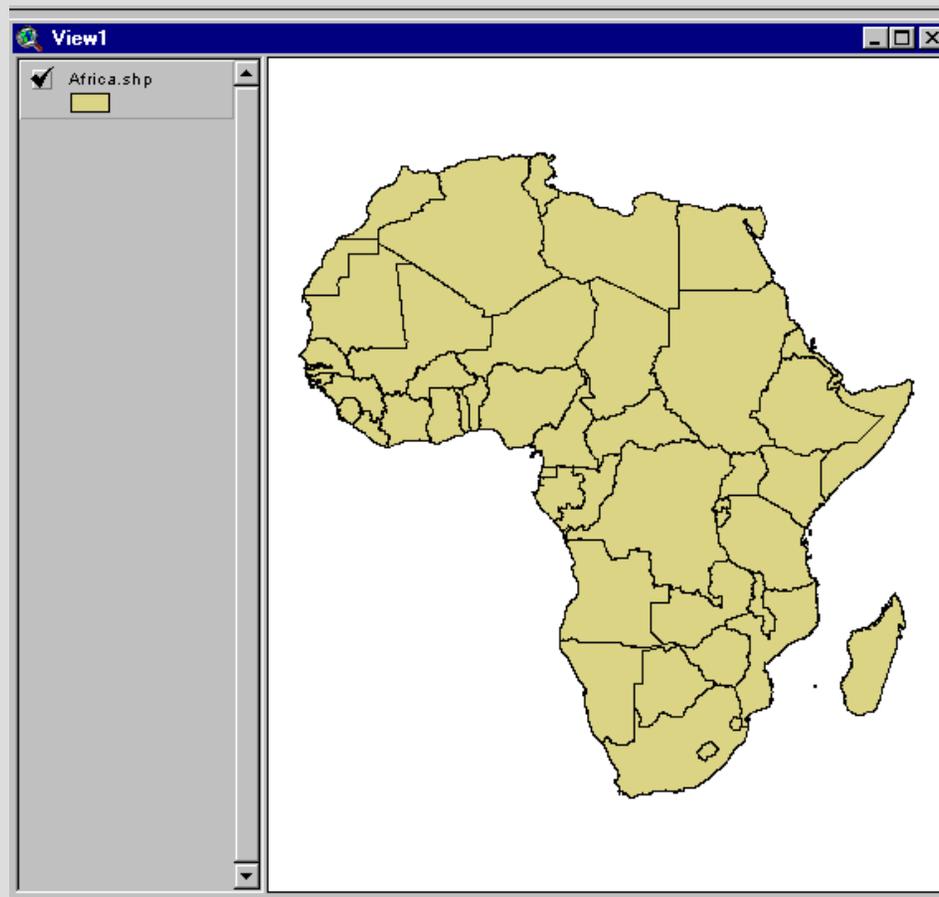
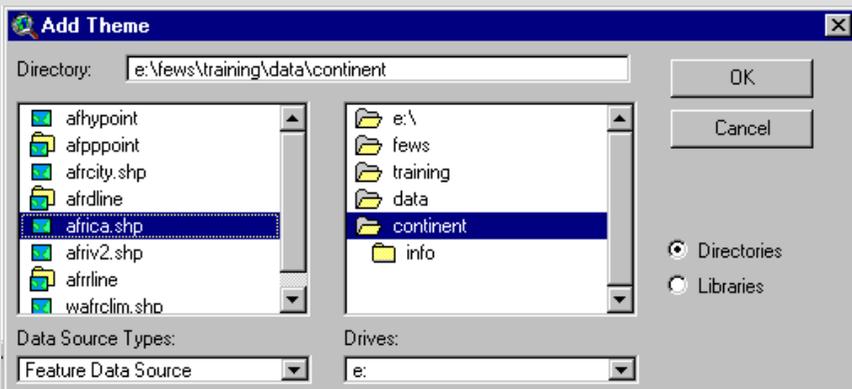
Graphic Image Files (.jpg and .bmp)

## Grid Data Sources:

Gridded Geographic Data (spatial analyst)

# Displaying Themes in a View:

Check boxes  
turn **Themes**  
On/Off



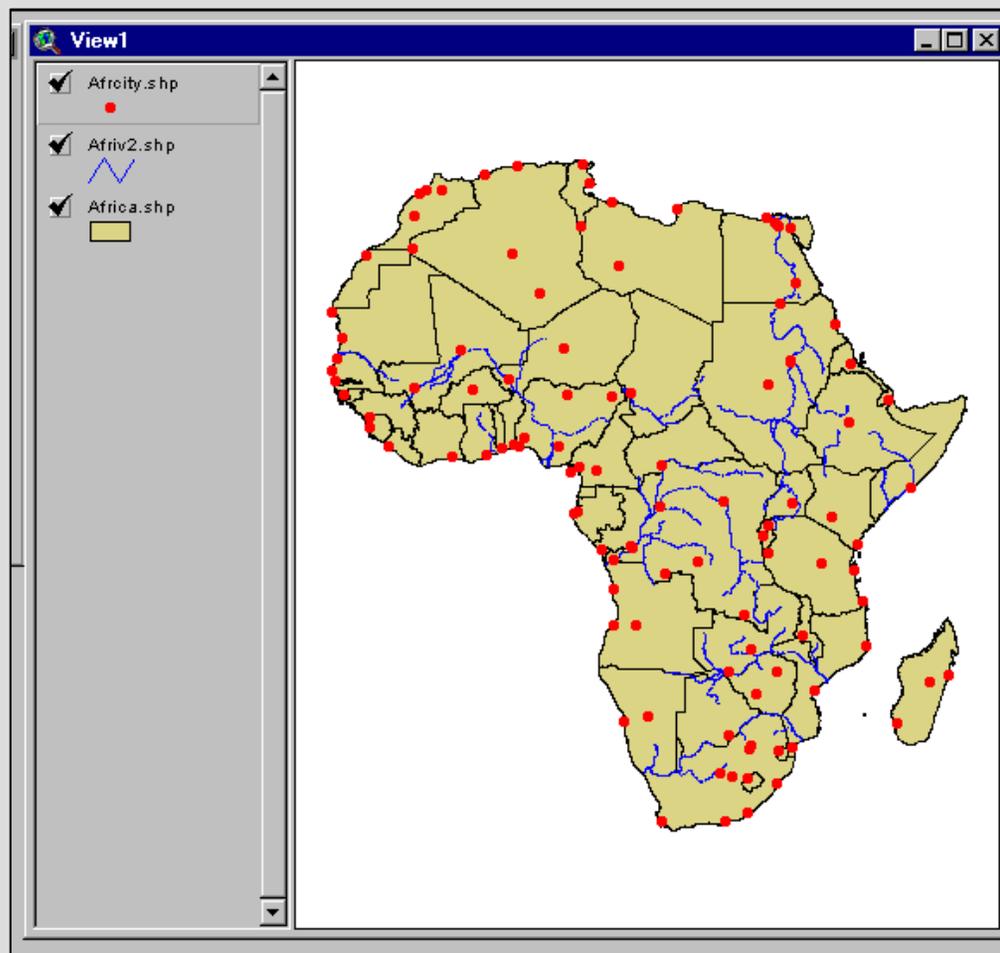
# Multiple Theme Display:

**Themes** display in the order they are stacked in the view's table of contents.



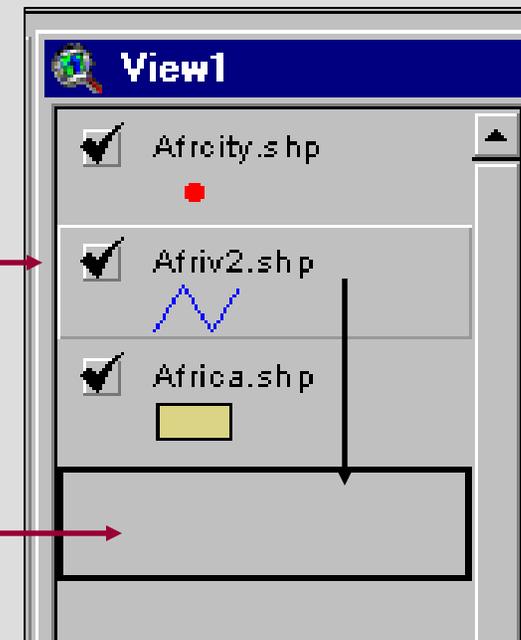
## Types of Themes:

- 1) Point (cities) ●
- 2) Line (rivers) ~
- 3) Polygon (admin) ■



# Managing Themes:

- 1) Turn **Themes** on/off using check boxes
- 2) Select **Themes** in the table of contents to make them active\* (active **Themes** appear raised)
- 3) Change the order of **Themes** in the table of contents by clicking and dragging the theme to the desired location.



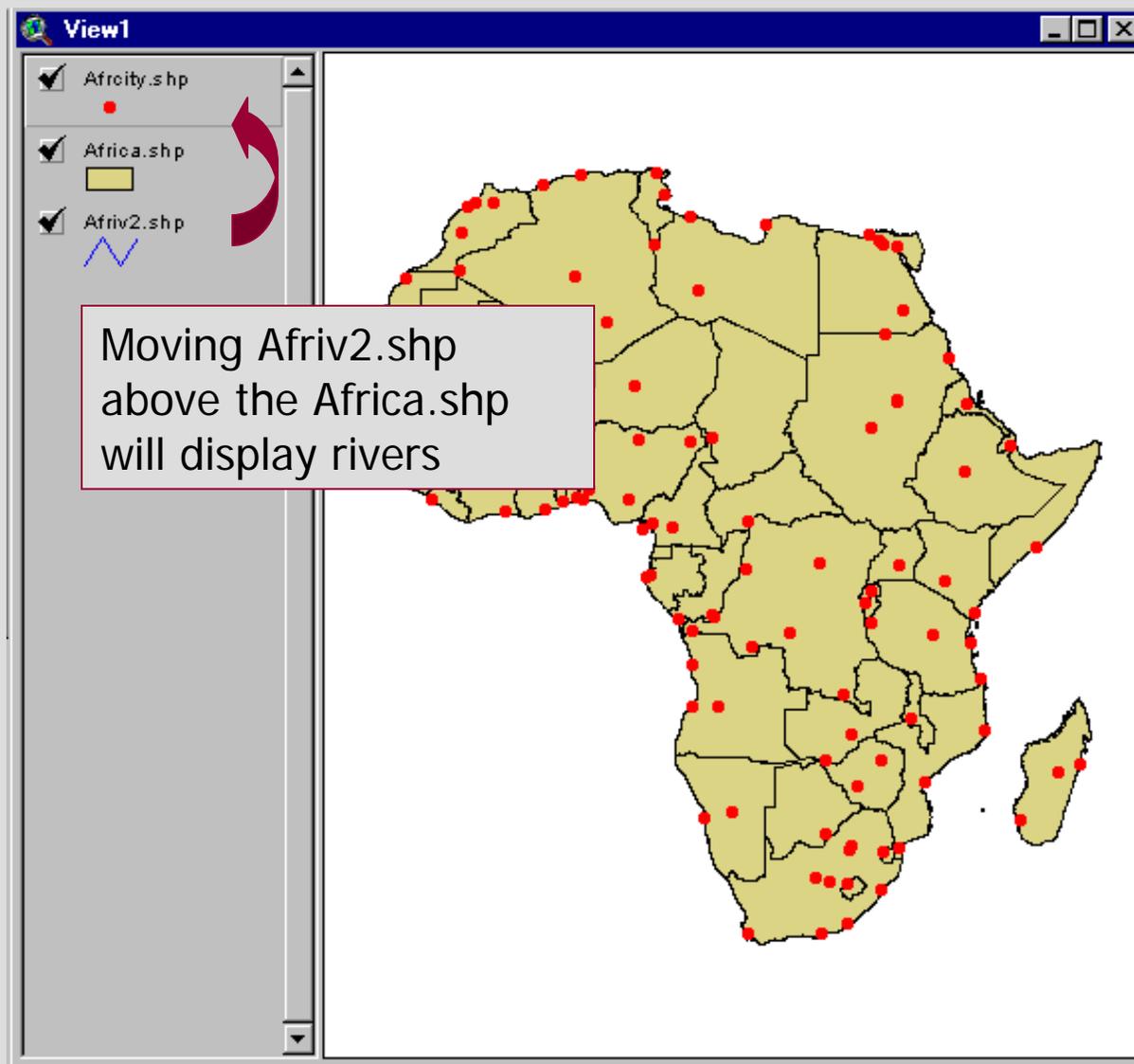
\* Many operations can only be performed on active themes

# Theme Ordering:

Changing the order of themes can result in some themes being hidden even though they are turned on.

In this case, the rivers theme is “behind” the africa.shp theme.

Logical ordering of themes is necessary to create effective maps.



# Introducing Tables:

- ❑ A document for displaying tabular information
- ❑ Formatted into records (rows) and fields (columns)
- ❑ Contains descriptive information about theme features

**Fields** →

**Records** ↓

Shape	Area	Perimeter	Cities	Cities_id	Name	Country	Population	Capital
Point	0.000	0.000	137	181	Tunis	Tunisia	1225000	Y
Point	0.000	0.000	162	210	Fes	Morocco	535000	N
Point	0.000	0.000	181	241	Cairo	Egypt	9300000	Y
Point	0.000	0.000	220	296	Bur Sudan	Sudan	206727	N
Point	0.000	0.000	234	322	Niamey	Niger	398265	Y
Point	0.000	0.000	237	326	Bamako	Mali	646163	Y
Point	0.000	0.000	246	344	Ibadan	Nigeria	1144000	N
Point	0.000	0.000	248	350	Enugu	Nigeria	252500	N
Point	0.000	0.000	250	355	Accra	Ghana	1250000	Y
Point	0.000	0.000	251	356	Abidjan	Ivory Coast	1950000	Y
Point	0.000	0.000	253	359	Bangui	Cent Af Rep	473817	Y
Point	0.000	0.000	254	361	Yaounde	Cameroon	653670	Y
Point	0.000	0.000	258	365	Muqdisho	Somalia	600000	Y
Point	0.000	0.000	259	367	Kisangani	Zaire	282650	N
Point	0.000	0.000	263	377	Brazzaville	Congo	585812	Y



# Tables provide the ability to...

- ❑ display descriptive data
- ❑ query data fields
- ❑ analyze information

## Four Field Types

- 1) Character
- 2) Numeric
- 3) Date
- 4) Boolean (y/n, t/f)

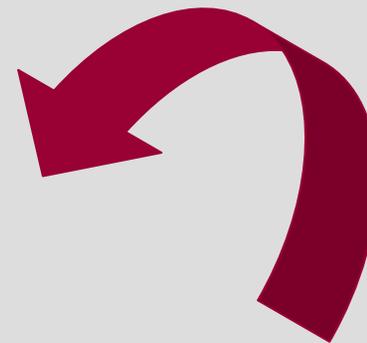
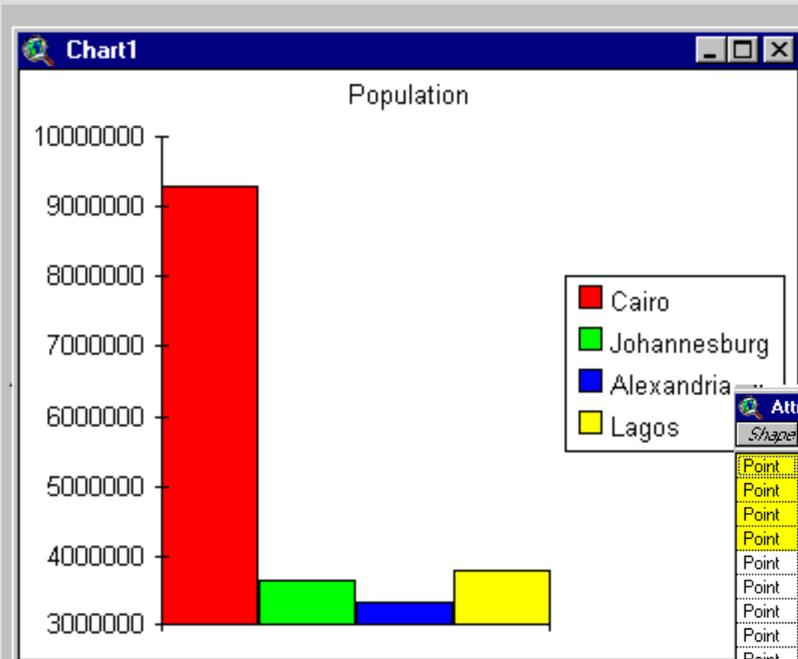
Shape	Area	Perimeter	Cities	Cities_id	Name	Country	Population	Capital
Point	0.000	0.000	181	241	Cairo	Egypt	9300000	Y
Point	0.000	0.000	283	414	Johannesburg	South Africa	3650000	N
Point	0.000	0.000	403	235	Alexandria	Egypt	3350000	N
Point	0.000	0.000	526	1203	Lagos	Nigeria	3800000	Y
Point	0.000	0.000	137	181	Tunis	Tunisia	1225000	Y
Point	0.000	0.000	162	210	Fes	Morocco	535600	N
Point	0.000	0.000	220	296	Bur Sudan	Sudan	206727	N
Point	0.000	0.000	234	322	Niamey	Niger	398265	Y
Point	0.000	0.000	237	326	Bamako	Mali	645163	Y
Point	0.000	0.000	246	344	Ibadan	Nigeria	1144000	N
Point	0.000	0.000	248	350	Enugu	Nigeria	252500	N
Point	0.000	0.000	250	355	Accra	Ghana	1250000	Y
Point	0.000	0.000	251	356	Abidjan	Ivory Coast	1950000	Y
Point	0.000	0.000	253	359	Bangui	Cent Af Rep	473817	Y
Point	0.000	0.000	254	361	Yaounde	Cameroun	653670	Y

Selected cities with a population greater than 3,000,000 (highlighted yellow areas)

# Introducing Charts:

Graphic display of tabular data

Attribute information can be visually compared



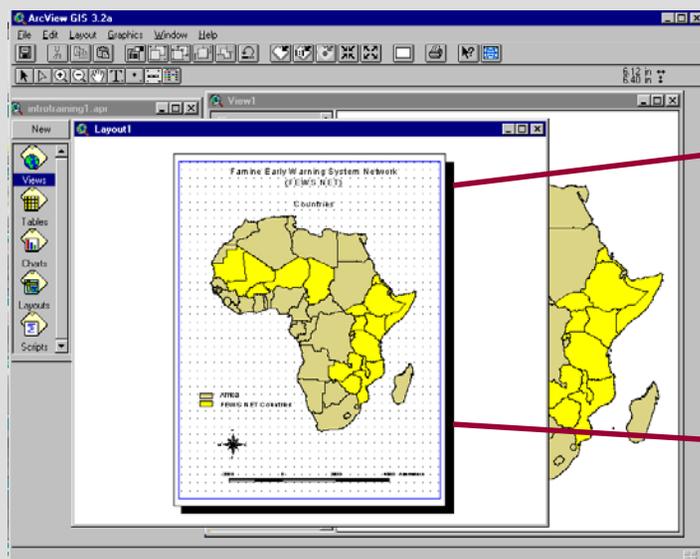
Charts are dynamic in that they display the current state of data in the table

Shape	Area	Perimeter	Cities	Cities_id	Name	Country	Population	Capital
Point	0.000	0.000	181	241	Cairo	Egypt	9300000	Y
Point	0.000	0.000	283	414	Johannesburg	South Africa	3650000	N
Point	0.000	0.000	403	235	Alexandria	Egypt	3350000	N
Point	0.000	0.000	526	1203	Lagos	Nigeria	3800000	Y
Point	0.000	0.000	137	181	Tunis	Tunisia	1225000	Y
Point	0.000	0.000	162	210	Fes	Morocco	535000	N
Point	0.000	0.000	220	296	Bur Sudan	Sudan	206727	N
Point	0.000	0.000	234	322	Niamey	Niger	398265	Y
Point	0.000	0.000	237	326	Bamako	Mali	646163	Y
Point	0.000	0.000	246	344	Ibadan	Nigeria	1144000	N
Point	0.000	0.000	248	350	Enugu	Nigeria	252500	N
Point	0.000	0.000	250	355	Accra	Ghana	1250000	Y
Point	0.000	0.000	251	356	Abidjan	Ivory Coast	1950000	Y
Point	0.000	0.000	253	359	Bangui	Cent Af Rep	473817	Y
Point	0.000	0.000	254	361	Yaounde	Cameroun	653670	Y



# Introducing Layouts:

- ❑ Allow the user to create presentation-quality maps
- ❑ Enable the display of multiple documents including views, tables, charts and graphics
- ❑ Layouts can be saved as graphics files for use in word documents or sent to a printer/plotter for creating hard-copy maps



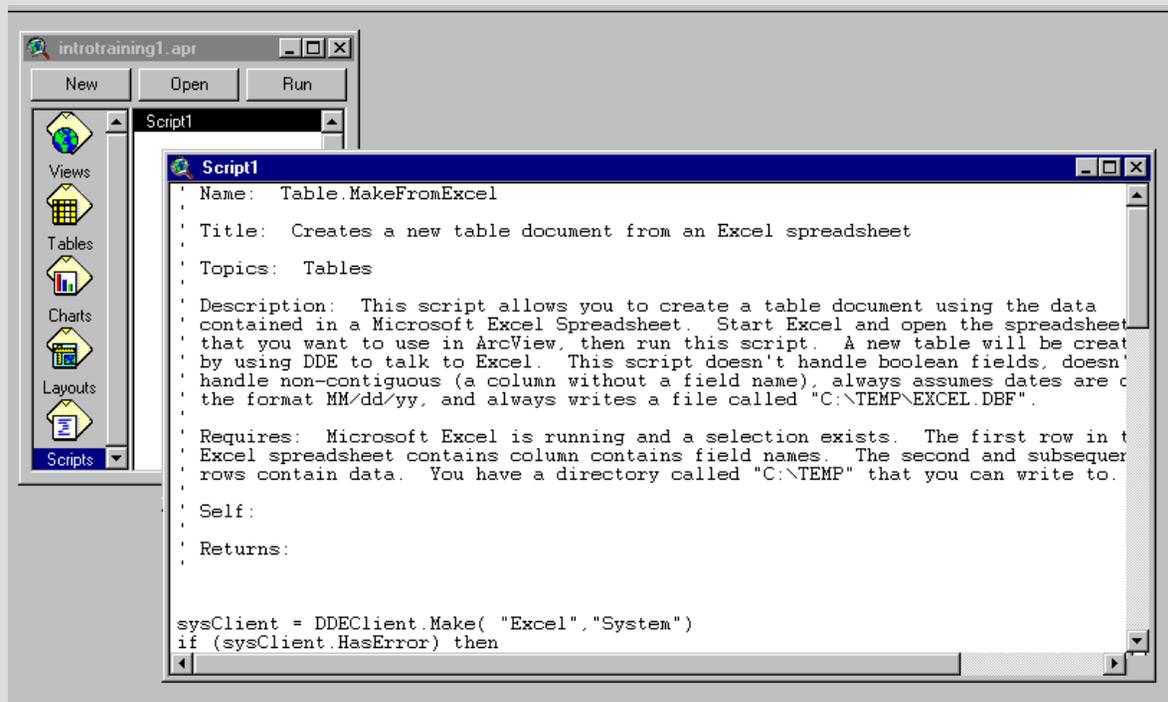
Graphics File  
(.bmp, jpg, .wmf, and others)

Printer / Plotter



# Introducing Scripts:

- ❑ A text document written in the Avenue programming language
- ❑ Automates tasks, adds new functions, creates complete applications



## Scripts Are:

- readily available
- easy to use
- customizable

# Using ArcView Help:

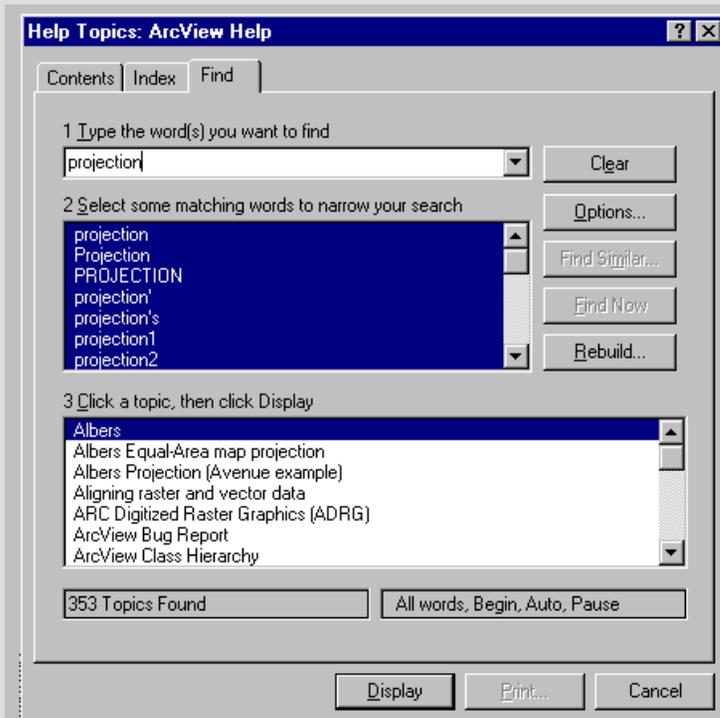
ArcView help is available at anytime during an ArcView session. The system is easy to navigate and provides guidance for specific tasks. The help system also provides a glossary of ArcView and GIS terms.



Menu Bar – contents, index, find



Button Bar – buttons, tools, menus



# *ArcView Basics Summary*

- Examine Graphical User Interface (GUI)
- Open a New Project
- Add a View Document to the Project
- Add Themes to the View
- Display and Manage Themes
- Open a Table
- Open a Script Window / View a Script
- Explore ArcView Help

